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Applicant : Jin-Soo Kim, et al.

Art Unit : 1645

Serial No. : 09/785,632

Examiner : Unknown

Filed : February 16, 2001

TECH CENTER 1600/2900

Title : ZINC FINGER DOMAINS AND METHODS OF IDENTIFYING SAME

Box Sequence

Commissioner for Patents

Washington, D.C. 20231

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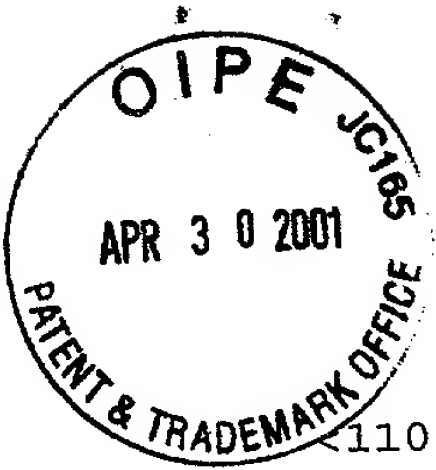
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Jennifer H. Payne

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SEQUENCE LISTING

<110> Kim, Jin-Soo
Kwon, Young Do
Kim, Hyun-Won
Ryu, Eun-Hyun
Hwang, Moon-Sun

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IDENTIFYING SAME

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1				5					10					15		

cgg	gaa	ttc	aga	tct	act	agt	gcg	gcc	gct	aag	taagtaagac	gtcgagctcg	101
Arg	Glu	Phe	Arg	Ser	Thr	Ser	Ala	Ala	Ala	Lys			
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			1				5					

tcc	tgc	gat	cgc	cgc	ttt	tct	cgc	tcg	gat	gag	ctt	acc	cgc	cat	atc	99
Ser	Cys	Asp	Arg	Arg	Phe	Ser	Arg	Ser	Asp	Glu	Leu	Thr	Arg	His	Ile	
10					15					20					25	

cgc	atc	cac	act	ggc	cag	aag	ccc	ttc	cag	tgt	cga	atc	tgc	atg	cgt	147
Arg	Ile	His	Thr	Gly	Gln	Lys	Pro	Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	
				30					35					40		

aac	ttc	agt	cgt	agt	gac	cac	ctt	acc	acc	cac	atc	cgg	acc	cac	acc	195
Asn	Phe	Ser	Arg	Ser	Asp	His	Leu	Thr	Thr	His	Ile	Arg	Thr	His	Thr	
			45					50					55			

ggc	gag	aag	cct	ttt	gcc	tgt	gac	att	tgt	ggg	agg	aag	ttt	gcc	agg	243
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Gly Glu Lys Pro Phe Ala Cys Asp Ile Cys Gly Arg Lys Phe Ala Arg
 60 65 70

agt gat gaa cgc aag agg cat acc aaa atc cat tta aga cag aag gat 291
 Ser Asp Glu Arg Lys Arg His Thr Lys Ile His Leu Arg Gln Lys Asp
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ccgcgggaat cc 303

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 Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Arg Ser Asp His
 35 40 45
 Leu Thr Thr His Ile Arg Thr His Thr Gly Glu Lys Pro Phe Ala Cys
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 65 70 75 80
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tgt ccc tca aac ctt cga agg cat gga agg act cac acc ggc gag aaa 96
 Cys Pro Ser Asn Leu Arg Arg His Gly Arg Thr His Thr Gly Glu Lys
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ccg cgg 102
 Pro Arg

<210> 23
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<213> Homo sapiens

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Cys	Pro	Ser	Asn	Leu	Arg	Arg	His	Gly	Arg	Thr	His	Thr	Gly	Glu	Lys
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Pro Arg

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1				5				10					15			

cac	agc	tcc	aac	ttc	aat	aaa	cac	cac	aga	atc	cac	acc	ggc	gaa	aag	96
His	Ser	Ser	Asn	Phe	Asn	Lys	His	His	Arg	Ile	His	Thr	Gly	Glu	Lys	
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ccg cgg
Pro Arg

102

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<400> 25

Thr	Gly	Glu	Lys	Pro	Tyr	Lys	Cys	Lys	Glu	Cys	Gly	Lys	Ala	Phe	Asn
1				5				10					15		
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Pro Arg

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Thr Gly Glu Arg Pro Phe Glu Cys Lys Glu Cys Gly Lys Ala Phe Ser
 1 5 10 15

agt ggt tca aac ttc act cga cat cag aga att cac acc ggt gaa aag 96
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 20 25 30

ccg cgg 102
 Pro Arg

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 Pro Arg

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 20 25 30

gaa aga ccg cgg 108
 Glu Arg Pro Arg
 35

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25

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1 5 10 15

caa aat tca act ctc aga gta cac cag aga att cac acc ggc gaa aag 96
Gln Asn Ser Thr Leu Arg Val His Gln Arg Ile His Thr Gly Glu Lys
20 25 30

ccg cgg 102
Pro Arg

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20 25 30
Pro Arg

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1 5 10 15

gtg agc tca acc ctt att aga cat cag aga atc cac acc ggc gag aga 96
Val Ser Ser Thr Leu Ile Arg His Gln Arg Ile His Thr Gly Glu Arg
20 25 30

ccg cgg
Pro Arg

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Pro Arg

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cac agg cac cag aga acg cac 69
His Arg His Gln Arg Thr His
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His Arg His Gln Arg Thr His
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 Gly Val His Gln Arg Thr His
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 Gly Arg His Lys Arg Thr His
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 Gly Arg His Lys Arg Thr His
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 Thr Arg His Lys Ile Val His
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 Thr Arg His Lys Ile Val His
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<400> 64
 tat aag tgc atg gag tgt ggg aag gct ttt aac cgc agg tca cac ctc 48
 Tyr Lys Cys Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu
 1 5 10 15
 aca cgg cac cag cgg att cac 69
 Thr Arg His Gln Arg Ile His
 20

<210> 65
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 65
 Tyr Lys Cys Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu
 1 5 10 15
 Thr Arg His Gln Arg Ile His
 20

<210> 66
 <211> 69
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(69)

<400> 66
 tat aca tgt aaa cag tgt ggg aaa gcc ttc agt gtt tcc agt tcc ctt 48
 Tyr Thr Cys Lys Gln Cys Gly Lys Ala Phe Ser Val Ser Ser Ser Leu
 1 5 10 15

cga aga cat gaa acc act cac
 Arg Arg His Glu Thr Thr His
 20

69

<210> 67
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 67
 Tyr Thr Cys Lys Gln Cys Gly Lys Ala Phe Ser Val Ser Ser Ser Leu
 1 5 10 15
 Arg Arg His Glu Thr Thr His
 20

<210> 68
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 68
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa
 1 5 10 15
 Ser Asn Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 69
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 69
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa His Xaa
 1 5 10 15
 Ser Asn Xaa Xaa Lys His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 70
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 70
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Ser Xaa
 1 5 10 15
 Ser Asn Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 71
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 71

Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa
1				5					10					15	
Ser	Thr	Xaa	Xaa	Val	His	Xaa	Xaa	Xaa	Xaa	Xaa	His				
				20				25							

<210> 72

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(28)

<223> Xaa = any amino acid

<221> VARIANT

<222> 1, 13

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> 18

<223> Xaa = Ser or Thr

<221> VARIANT

<222> 19

<223> Xaa = hydrophobic residue

<400> 72

Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Val	Xaa
1				5					10					15	
Ser	Xaa	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His				
				20				25							

<210> 73

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(28)

<223> Xaa = any amino acid

<221> VARIANT

<222> 1, 13

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> 19

<223> Xaa = hydrophobic residue

<400> 73

Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa
 1 5 10 15
 Ser His Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 74
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 74
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa
 1 5 10 15
 Ser Asn Xaa Xaa Val His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 75
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> 18
 <223> Xaa = Ser or Thr

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 75
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa

<221> VARIANT
<222> 7

<223> Xaa = Leu, Ile, Val, or Met

<221> VARIANT

<222> (12)...(12)

<223> Xaa = Leu, Ile, or Val

<221> VARIANT

<222> (13)...(13)

<223> Xaa = Arg, Lys, Asn, Gln, Glu, Ser, Thr, Ala, Ile,
or Tyr

<221> VARIANT

<222> (14)...(14)

<223> Xaa = Leu, Ile, Val, Phe, Ser, Thr, Asn, Lys, or
His

<221> VARIANT

<222> (16)...(16)

<223> Xaa = Phe, Tyr, Val, or Cys

<221> VARIANT

<222> (18)...(18)

<223> Xaa = Asn, Asp, Gln, Thr, Ala, or His

<221> VARIANT

<222> (24)...(24)

<223> Xaa = Arg, Lys, Asn, Ala, Ile, Met, or Trp

<400> 77

Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Trp	Xaa
1				5				10						15	
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa								
				20											

<210> 78

<211> 6

<212> PRT

<213> Eukaryote

<220>

<221> VARIANT

<222> 3

<223> Xaa = Glu or Gln

<221> VARIANT

<222> 4

<223> Xaa = Lys or Arg

<221> VARIANT

<222> 6

<223> Xaa = Tyr or Phe

<400> 78

Thr	Gly	Xaa	Xaa	Pro	Xaa
1				5	

<210> 79

<211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> synthetic oligonucleotide

<400> 79
 tgcctgcagc atttgtggga ggaagtttg

29

<210> 80
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> synthetic oligonucleotide

<400> 80
 atgctgcagg cttaaggctt ctgcccgtg

30

<210> 81
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer for PCR

<221> misc_feature
 <222> (0)...(0)
 <223> n = A, T, G, or C; y = T or C; s = G or C; r = G
 or A

<400> 81
 gcgtccggac ncayacnggn sara

24

<210> 82
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer for PCR

<221> misc_feature
 <222> (0)...(0)
 <223> n = A, T, G, or C; b = G, C, or T; r = G or A; w =
 A or T; y = T or C

<400> 82
 cggaattcan nbrwanggyy tytc

24

<210> 83
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>

<223> amino acid motif

<221> VARIANT

<222> 4

<223> Xaa = Glu or Gln

<221> VARIANT

<222> 5

<223> Xaa = Lys or Arg

<221> VARIANT

<222> 3

<223> Xaa = Tyr or Phe

<400> 83

His Thr Gly Xaa Xaa Pro Xaa

1

5

<210> 84

<211> 54

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<400> 84

gggcccgggg agaagcctta cgcattgtcca gtcgaatctt gtgatagaag attc

54

<210> 85

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<221> misc_feature

<222> (0)...(0)

<223> n = A, T, G, or C; b = G, C, or T; s = G or C

<400> 85

ctccccgcgg ttccgcgggtg tggattctga tatgsnbsnb aagsnbsnbs nbsnbtgaga
atcttctatc acaag

60

75

<210> 86

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<400> 86

ctagaccggg gaattcgtcg acg

23

<210> 87
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> synthetic oligonucleotide

<400> 87
 gatccgtcga cgaattcccg ggt

23

<210> 88
 <211> 38
 <212> DNA
 <213> syArtificial Sequence

<220>
 <223> synthetic oligonucleotide

<221> misc_feature
 <222> (0)...(0)
 <223> n = A, T, G, or C

<400> 88
 ccggtnnntg ggcgtacnnn tgggcgtcan nntgggcg

38

<210> 89
 <211> 38
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> synthetic oligonucleotide

<221> misc_feature
 <222> (0)...(0)
 <223> n = A, T, G, or C

<400> 89
 tcgacgcccc nnntgacgcc canngtacg cccannna

38

<210> 90
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> synthetic probe for gel shift assay

<400> 90
 ccgggtcgcg cgtgggcggt accg

24

<210> 91
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>

<223> synthetic probe for gel shift assay

<400> 91

tcgacggtac cgcccacgcg cgac

24

<210> 92

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic probe for gel shift assay

<400> 92

ccgggtcgcg agcgggcggt accg

24

<210> 93

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic probe for gel shift assay

<400> 93

tcgacggtac cgcccgcgcg cgac

24

<210> 94

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic probe for gel shift assay

<400> 94

ccgggtcgtg cttgggcggt accg

24

<210> 95

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic probe for gel shift assay

<400> 95

tcgacggtac cgcccaagca cgac

24

<210> 96

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic probe for gel shift assay

<400> 96

ccgggtcggg actgggcggt accg

24

<210> 97

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic probe for gel shift assay

<400> 97

tcgacggtac cgcccagtcg cgac

24

<210> 98

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic probe for gel shift assay

<400> 98

ccgggtcggg agtgggcggt accg

24

<210> 99

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic probe for gel shift assay

<400> 99

tcgacggtac cgcccactcc cgac

24

<210> 100

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic probe for gel shift assay

<400> 100

ccgggtcggg catgggcggt accg

24

<210> 101

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic probe for gel shift assay

<400> 101
tcgacggtac cgcccatgtc cgac

24

<210> 102
<211> 69
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)...(69)

<400> 102
tat aag tgt aag gaa tgt ggg cag gcc ttt aga cag cgt gca cat ctt
Tyr Lys Cys Lys Glu Cys Gly Gln Ala Phe Arg Gln Arg Ala His Leu
1 5 10 15

48

att cga cat cac aaa ctt cac
Ile Arg His His Lys Leu His
20

69

<210> 103
<211> 23
<212> PRT
<213> Homo sapiens

<400> 103
Tyr Lys Cys Lys Glu Cys Gly Gln Ala Phe Arg Gln Arg Ala His Leu
1 5 10 15
Ile Arg His His Lys Leu His
20

<210> 104
<211> 69
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)...(69)

<400> 104
tat aag tgt cat caa tgt ggg aaa gcc ttt att caa tcc ttt aac ctt
Tyr Lys Cys His Gln Cys Gly Lys Ala Phe Ile Gln Ser Phe Asn Leu
1 5 10 15

48

cga aga cat gag aga act cac
Arg Arg His Glu Arg Thr His
20

69

<210> 105
<211> 23
<212> PRT
<213> Homo sapiens

<400> 105

Tyr Lys Cys His Gln Cys Gly Lys Ala Phe Ile Gln Ser Phe Asn Leu
 1 5 10 15
 Arg Arg His Glu Arg Thr His
 20

<210> 106

<211> 69

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)...(69)

<400> 106

ttc cag tgt aat cag tgt ggg gca tct ttt act cag aaa ggt aac ctc 48
 Phe Gln Cys Asn Gln Cys Gly Ala Ser Phe Thr Gln Lys Gly Asn Leu
 1 5 10 15

ctc cgc cac att aaa ctg cac 69
 Leu Arg His Ile Lys Leu His
 20

<210> 107

<211> 23

<212> PRT

<213> Homo sapiens

<400> 107

Phe Gln Cys Asn Gln Cys Gly Ala Ser Phe Thr Gln Lys Gly Asn Leu
 1 5 10 15
 Leu Arg His Ile Lys Leu His
 20

<210> 108

<211> 72

<212> DNA

<213> Artificial Sequence

<220>

<223> primer for PCR

<221> misc_feature

<222> (0)...(0)

<223> n =A, T, G, or C

<400> 108

accacactg gccagaaacc cnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn 60
 nnnnnnnnnnn nn 72

<210> 109

<211> 66

<212> DNA

<213> Artificial Sequence

<220>

<223> primer for PCR

<221> misc_feature

<222> (0)...(0)

<223> n = A, T, G, or C

<400> 109

gatctgaatt cattcaccgg tnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn 60
 nnnnnnn 66

<210> 110

<211> 69

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)...(69)

<400> 110

tac aaa tgt gaa gaa tgt ggc aaa gcc ttt agg cag tcc tca cac ctt 48
 Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Arg Gln Ser Ser His Leu
 1 5 10 15

act aca cat aag ata att cat 69
 Thr Thr His Lys Ile Ile His
 20

<210> 111

<211> 23

<212> PRT

<213> Homo sapiens

<400> 111

Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Arg Gln Ser Ser His Leu
 1 5 10 15
 Thr Thr His Lys Ile Ile His
 20

<210> 112

<211> 69

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)...(69)

<400> 112

tat gag tgt gat cac tgt gga aaa tcc ttt agc cag agc tct cat ctg 48
 Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu
 1 5 10 15

aat gtg cac aaa aga act cac 69
 Asn Val His Lys Arg Thr His

20

<210> 113
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 113
 Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu
 1 5 10 15
 Asn Val His Lys Arg Thr His
 20

<210> 114
 <211> 69
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(69)

<400> 114
 tac atg tgc agt gag tgt ggg cga ggc ttc agc cag aag tca aac ctc 48
 Tyr Met Cys Ser Glu Cys Gly Arg Gly Phe Ser Gln Lys Ser Asn Leu
 1 5 10 15
 atc ata cac cag agg aca cac 69
 Ile Ile His Gln Arg Thr His
 20

<210> 115
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 115
 Tyr Met Cys Ser Glu Cys Gly Arg Gly Phe Ser Gln Lys Ser Asn Leu
 1 5 10 15
 Ile Ile His Gln Arg Thr His
 20

<210> 116
 <211> 69
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(69)

<400> 116
 tat gaa tgt gaa aaa tgt ggc aaa gct ttt aac cag tcc tca aat ctt 48
 Tyr Glu Cys Glu Lys Cys Gly Lys Ala Phe Asn Gln Ser Ser Asn Leu
 1 5 10 15

act aga cat aag aaa agt cat
 Thr Arg His Lys Lys Ser His
 20

69

<210> 117
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 117
 Tyr Glu Cys Glu Lys Cys Gly Lys Ala Phe Asn Gln Ser Ser Asn Leu
 1 5 10 15
 Thr Arg His Lys Lys Ser His
 20

<210> 118
 <211> 69
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(69)

<400> 118
 tat gag tgc aat gaa tgt ggg aag ttt ttt agc cag agc tcc agc ctc
 Tyr Glu Cys Asn Glu Cys Gly Lys Phe Phe Ser Gln Ser Ser Ser Leu
 1 5 10 15

48

att aga cat agg aga agt cac
 Ile Arg His Arg Arg Ser His
 20

69

<210> 119
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 119
 Tyr Glu Cys Asn Glu Cys Gly Lys Phe Phe Ser Gln Ser Ser Ser Leu
 1 5 10 15
 Ile Arg His Arg Arg Ser His
 20

<210> 120
 <211> 69
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(69)

<400> 120

tat gag tgt cac gat tgc gga aag tcc ttt agg cag agc acc cac ctc 48
 Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu
 1 5 10 15

act cag cac cgg agg atc cac 69
 Thr Gln His Arg Arg Ile His
 20

<210> 121
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 121
 Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu
 1 5 10 15
 Thr Gln His Arg Arg Ile His
 20

<210> 122
 <211> 69
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(69)

<400> 122
 tat gag tgt cac gat tgc gga aag tcc ttt agg cag agc acc cac ctc 48
 Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu
 1 5 10 15

act cgg cac cgg agg atc cac 69
 Thr Arg His Arg Arg Ile His
 20

<210> 123
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 123
 Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu
 1 5 10 15
 Thr Arg His Arg Arg Ile His
 20

<210> 124
 <211> 69
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS

<222> (1)...(69)

<400> 124

cac	aag	tgc	ctt	gaa	tgt	ggg	aaa	tgc	ttc	agt	cag	aac	acc	cat	ctg	48
His	Lys	Cys	Leu	Glu	Cys	Gly	Lys	Cys	Phe	Ser	Gln	Asn	Thr	His	Leu	
1				5					10					15		

act	cgc	cac	caa	cgc	acc	cac	69
Thr	Arg	His	Gln	Arg	Thr	His	
			20				

<210> 125

<211> 23

<212> PRT

<213> Homo sapiens

<400> 125

His	Lys	Cys	Leu	Glu	Cys	Gly	Lys	Cys	Phe	Ser	Gln	Asn	Thr	His	Leu
1				5					10					15	
Thr	Arg	His	Gln	Arg	Thr	His									
			20												

<210> 126

<211> 75

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)...(75)

<400> 126

tac	cac	tgt	gac	tgg	gac	ggc	tgt	gga	tgg	aaa	ttc	gcc	cgc	tca	gat	48
Tyr	His	Cys	Asp	Trp	Asp	Gly	Cys	Gly	Trp	Lys	Phe	Ala	Arg	Ser	Asp	
1				5					10					15		

gaa	ctg	acc	agg	cac	tac	cgt	aaa	cac	75
Glu	Leu	Thr	Arg	His	Tyr	Arg	Lys	His	
			20					25	

<210> 127

<211> 25

<212> PRT

<213> Homo sapiens

<400> 127

Tyr	His	Cys	Asp	Trp	Asp	Gly	Cys	Gly	Trp	Lys	Phe	Ala	Arg	Ser	Asp
1				5					10					15	
Glu	Leu	Thr	Arg	His	Tyr	Arg	Lys	His							
			20					25							

<210> 128

<211> 75

<212> DNA

<213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(75)

<400> 128
 tac aga tgc tca tgg gaa ggg tgt gag tgg cgt ttt gca aga agt gat 48
 Tyr Arg Cys Ser Trp Glu Gly Cys Glu Trp Arg Phe Ala Arg Ser Asp
 1 5 10 15
 gag tta acc agg cac ttc cga aag cac 75
 Glu Leu Thr Arg His Phe Arg Lys His
 20 25

<210> 129
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 129
 Tyr Arg Cys Ser Trp Glu Gly Cys Glu Trp Arg Phe Ala Arg Ser Asp
 1 5 10 15
 Glu Leu Thr Arg His Phe Arg Lys His
 20 25

<210> 130
 <211> 75
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(75)

<400> 130
 ttc agc tgt agc tgg aaa ggt tgt gaa agg agg ttt gcc cgt tct gat 48
 Phe Ser Cys Ser Trp Lys Gly Cys Glu Arg Arg Phe Ala Arg Ser Asp
 1 5 10 15
 gaa ctg tcc aga cac agg cga acc cac 75
 Glu Leu Ser Arg His Arg Arg Thr His
 20 25

<210> 131
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 131
 Phe Ser Cys Ser Trp Lys Gly Cys Glu Arg Arg Phe Ala Arg Ser Asp
 1 5 10 15
 Glu Leu Ser Arg His Arg Arg Thr His
 20 25

<210> 132

<211> 75
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(75)

<400> 132
 ttc gcc tgc agc tgg cag gac tgc aac aag aag ttc gcg cgc tcc gac 48
 Phe Ala Cys Ser Trp Gln Asp Cys Asn Lys Lys Phe Ala Arg Ser Asp
 1 5 10 15
 gag ctg gcg cgg cac tac cgc aca cac 75
 Glu Leu Ala Arg His Tyr Arg Thr His
 20 25

<210> 133
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 133
 Phe Ala Cys Ser Trp Gln Asp Cys Asn Lys Lys Phe Ala Arg Ser Asp
 1 5 10 15
 Glu Leu Ala Arg His Tyr Arg Thr His
 20 25

<210> 134
 <211> 75
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(75)

<400> 134
 tac cac tgc aac tgg gac ggc tgc ggc tgg aag ttt gcg cgc tca gac 48
 Tyr His Cys Asn Trp Asp Gly Cys Gly Trp Lys Phe Ala Arg Ser Asp
 1 5 10 15
 gag ctc acg cgc cac tac cga aag cac 75
 Glu Leu Thr Arg His Tyr Arg Lys His
 20 25

<210> 135
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 135
 Tyr His Cys Asn Trp Asp Gly Cys Gly Trp Lys Phe Ala Arg Ser Asp
 1 5 10 15
 Glu Leu Thr Arg His Tyr Arg Lys His

20

25

<210> 136
 <211> 72
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(72)

<400> 136
 ttc ctc tgt cag tat tgt gca cag aga ttt ggg cga aag gat cac ctg 48
 Phe Leu Cys Gln Tyr Cys Ala Gln Arg Phe Gly Arg Lys Asp His Leu
 1 5 10 15
 act cga cat atg aag aag agt cac 72
 Thr Arg His Met Lys Lys Ser His
 20

<210> 137
 <211> 24
 <212> PRT
 <213> Homo sapiens

<400> 137
 Phe Leu Cys Gln Tyr Cys Ala Gln Arg Phe Gly Arg Lys Asp His Leu
 1 5 10 15
 Thr Arg His Met Lys Lys Ser His
 20

<210> 138
 <211> 78
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer for PCR

<400> 138
 tgtcgaatct gcatgcgtaa cttcagtcgt agtgaccacc ttaccaccca catccggacc 60
 cacactggcc agaaaccc 78

<210> 139
 <211> 81
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer for PCR

<400> 139
 ggtggcggcc gttacttact tagagctcga cgtcttactt acttagcggc cgcactagta 60
 gatctgaatt cattcacgg t 81

<210> 140

<211> 69
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(69)

<400> 140
 ttc cag tgt aaa act tgt cag cga aag ttc tcc cgg tcc gac cac ctg 48
 Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu
 1 5 10 15

aag acc cac acc agg act cat 69
 Lys Thr His Thr Arg Thr His
 20

<210> 141
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 141
 Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu
 1 5 10 15
 Lys Thr His Thr Arg Thr His
 20

<210> 142
 <211> 69
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(69)

<400> 142
 ttt gcc tgc gag gtc tgc ggt gtt cga ttc acc agg aac gac aag ctg 48
 Phe Ala Cys Glu Val Cys Gly Val Arg Phe Thr Arg Asn Asp Lys Leu
 1 5 10 15

aag atc cac atg cgg aag cac 69
 Lys Ile His Met Arg Lys His
 20

<210> 143
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 143
 Phe Ala Cys Glu Val Cys Gly Val Arg Phe Thr Arg Asn Asp Lys Leu
 1 5 10 15
 Lys Ile His Met Arg Lys His

20

<210> 144
 <211> 75
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(75)

<400> 144
 tat gta tgc gat gta gag gga tgt acg tgg aaa ttt gcc cgc tca gat 48
 Tyr Val Cys Asp Val Glu Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp
 1 5 10 15
 aag ctc aac aga cac aag aaa agg cac 75
 Lys Leu Asn Arg His Lys Lys Arg His
 20 25

<210> 145
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 145
 Tyr Val Cys Asp Val Glu Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp
 1 5 10 15
 Lys Leu Asn Arg His Lys Lys Arg His
 20 25

<210> 146
 <211> 69
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(69)

<400> 146
 tat att tgc aga aag tgt gga cgg ggc ttt agt cgg aag tcc aac ctt 48
 Tyr Ile Cys Arg Lys Cys Gly Arg Gly Phe Ser Arg Lys Ser Asn Leu
 1 5 10 15
 atc aga cat cag agg aca cac 69
 Ile Arg His Gln Arg Thr His
 20

<210> 147
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 147

Tyr Ile Cys Arg Lys Cys Gly Arg Gly Phe Ser Arg Lys Ser Asn Leu
 1 5 10 15
 Ile Arg His Gln Arg Thr His
 20

<210> 148
 <211> 69
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(69)

<400> 148
 tat cta tgt agt gag tgt gac aaa tgc ttc agt aga agt aca aac ctc 48
 Tyr Leu Cys Ser Glu Cys Asp Lys Cys Phe Ser Arg Ser Thr Asn Leu
 1 5 10 15

ata agg cat cga aga act cac 69
 Ile Arg His Arg Arg Thr His
 20

<210> 149
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 149
 Tyr Leu Cys Ser Glu Cys Asp Lys Cys Phe Ser Arg Ser Thr Asn Leu
 1 5 10 15
 Ile Arg His Arg Arg Thr His
 20

<210> 150
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 150
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa

1	5	10	15
Ala	His	Xaa	Xaa
	Arg	His	Xaa
		Xaa	Xaa
		Xaa	Xaa
		Xaa	His
	20	25	

<210> 151
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 151															
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa
1			5					10						15	
Phe	Asn	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His				
			20					25							

<210> 152
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 152															
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa
1			5					10						15	
Ser	His	Xaa	Xaa	Thr	His	Xaa	Xaa	Xaa	Xaa	Xaa	His				
			20					25							

<210> 153

<211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 153
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa
 1 5 10 15
 Ser His Xaa Xaa Val His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 154
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 154
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa
 1 5 10 15
 Ser Asn Xaa Xaa Ile His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 155
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> 1, 13

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> (1)...(28)

<223> Xaa = any amino acid

<221> VARIANT

<222> 19

<223> Xaa = hydrophobic residue

<400> 155

Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa
1				5					10					15	
Ser	Asn	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His				
			20					25							

<210> 156

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> 1, 13

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> (1)...(28)

<223> Xaa = any amino acid

<221> VARIANT

<222> 19

<223> Xaa = hydrophobic residue

<400> 156

Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa
1				5					10					15	
Thr	His	Xaa	Xaa	Gln	His	Xaa	Xaa	Xaa	Xaa	Xaa	His				
			20					25							

<210> 157

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(26)

<223> Xaa = any amino acid

<221> VARIANT

<222> 11

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> 17

<223> Xaa = hydrophobic residue

<400> 157

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa	Thr	His
1				5				10						15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His						
			20					25							

<210> 158

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> 1, 13

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> (1)...(28)

<223> Xaa = any amino acid

<221> VARIANT

<222> 19

<223> Xaa = hydrophobic residue

<400> 158

Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Xaa
1				5				10						15	
Asp	Lys	Xaa	Xaa	Ile	His	Xaa	Xaa	Xaa	Xaa	Xaa	His				
			20					25							

<210> 159

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> 1, 13

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> (1)...(28)

<223> Xaa = any amino acid

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 159
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa
 1 5 10 15
 Ser Asn Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 160
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 160
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa
 1 5 10 15
 Thr Asn Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 161
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 161

Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa
 1 5 10 15
 Gly Asn Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 162
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 162
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa
 1 5 10 15
 Asp Glu Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 163
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
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<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 163
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa
 1 5 10 15
 Asp His Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 164
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 164
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa
 1 5 10 15
 Asp His Xaa Xaa Thr His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 165
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> 1, 13
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> (1)...(28)
 <223> Xaa = any amino acid

<221> VARIANT
 <222> 19
 <223> Xaa = hydrophobic residue

<400> 165
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa
 1 5 10 15
 Asp Lys Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 166
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> 1, 13

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> (1)...(28)

<223> Xaa = any amino acid

<221> VARIANT

<222> 19

<223> Xaa = hydrophobic residue

<400> 166

Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Xaa
1				5				10						15	
Ser	His	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His				
				20				25							